

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-022075**Date Inspected:** 29-Dec-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Qiu Wen**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Umesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

BAY 14, OBG (NWIT # 7977)

This QA inspector performed Magnetic Particle Testing (MT) of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA inspector generated MT report for this date. The members are identified as OBG Components. The weld designations reviewed are as follows.

SA3409-001-072, 073

BAY 14, OBG (NWIT # 7972)

This QA inspector performed Magnetic Particle Testing (MT) of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA inspector generated MT report for this date. The members are identified as OBG Components. The weld designations reviewed are as follows.

FB3343-001-005~008, 012~014

FB3343-001-011 (MT transverse crack found during inspection, IR generated)

WELDING INSPECTION REPORT

(Continued Page 2 of 4)

This Quality Assurance (QA) Inspector observed the following work in progress:

Bay 14

OBG Segment 14W

During random in process inspection this QA inspector observed that the steel backing bar of Complete Joint penetration (CJP) weld joint was buckled up. The weld joint is identified as FB3343-001-347. This issue has been discussed with ZPMC CWI Mr. Qiu Wen and CT lead QA. Mr. Qiu Wen informed this QA that this issue would be corrected in a manner compliant with the contract documents. Attached photograph provide additional detail.

The Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3020K-009 [Sub Assembly (SA) plate 3409 to Longitudinal Diaphragm (LD) 3051A, CJP weld at panel point (PP) 127.3]. The welder is identified as 045227 and was observed welding in the 3G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with WPS: B-T-2233-ESAB.

The Shielded Metal Arc Welding (SMAW) process on weld joint no: SEG3020A-009 [Side Plate (SP) 3142C to Bottom Plate (BP) 3094A, CJP weld in between panel points (PP) 127~127.5]. The welders are identified as 045246 & 051348 and were observed welding in the 4G position. ZPMC QC was identified as Mr. Sun Tian Liang. The welding variables recorded by QC appeared to comply with WPS: B-P-2214-B-U2-FCM-1.

The Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3020K-025 [Sub Assembly (SA) plate 3409 to Bottom Plate (BP) 3091, CJP weld at panel point (PP) 127.3]. The welder is identified as 066239 and was observed welding in the 2G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with WPS: B-T-2232-ESAB.

The Shielded Metal Arc Welding (SMAW) process on weld joint no: SEG3020D-066 [Stiffener of Floor Beam (FB) 3343A to Longitudinal Diaphragm (LD) 3051A, CJP weld at panel point (PP) 128.3]. The welder is identified as 047864 and was observed welding in the 4G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with WPS: B-P-2214-Tc-U4b-FCM-1.

The Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3020BB-073 [Sub Assembly (SA) plate 3451 to Bottom Plate (BP) 3090A, CJP weld near panel point (PP) 125.5]. The welder is identified as 066236 and was observed welding in the 2G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with WPS: B-T-2232-ESAB.

The Flux Cored Arc Welding (FCAW) process on weld joint no: SEG3020BB-055 [Sub Assembly (SA) plate 3449 to Bottom Plate (BP) 3090A, CJP weld near panel point (PP) 125.5]. The welder is identified as 066695 and was observed welding in the 2G position. ZPMC QC was identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with WPS: B-T-2232-ESAB.

During the Quality Assurance Magnetic Particle Testing (MT) review of fillet welds located on Floor Beam (FB) 3343 of segment 14 west, this Quality Assurance (QA) Inspector discovered the following issues:

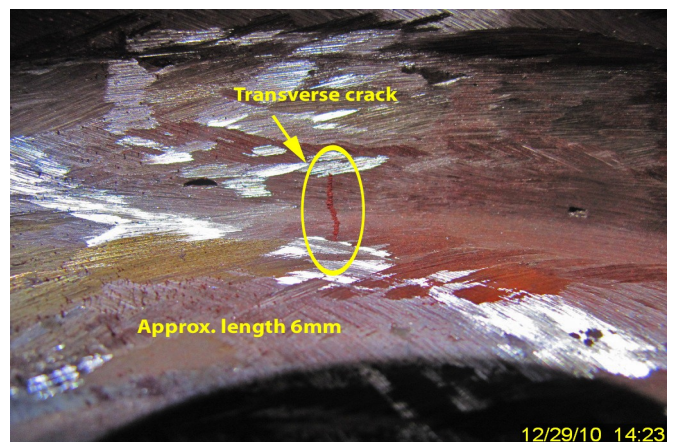
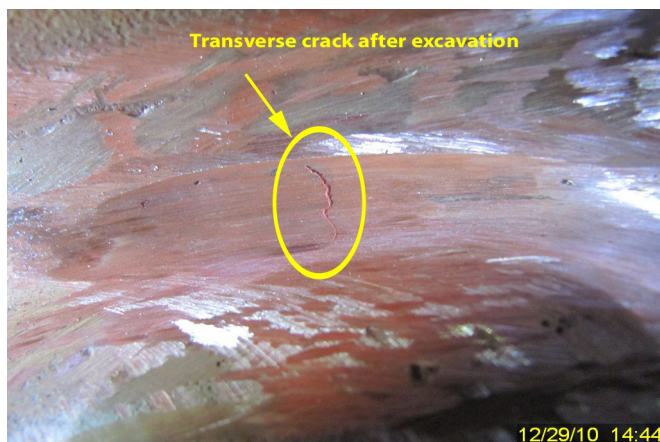
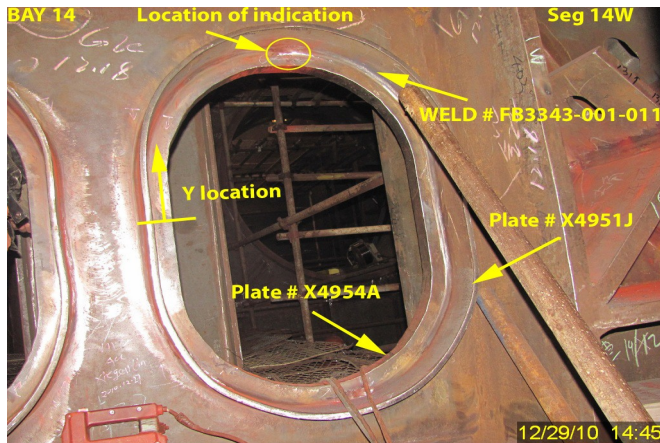
WELDING INSPECTION REPORT

(Continued Page 3 of 4)

- One (1) transverse crack found on the fillet weld measuring approximately 6mm in length.
- Y location of the indication is measured to be 485mm approx. (as shown in picture).
- The indication is clearly marked on the weld joint.
- The weld is identified as: FB3343-001-011.
- The Weld is a fillet weld joining the plate X4951J to the plate X4954A of Floor Beam (FB) 3343 at Panel Point (PP) 128.3.
- The weld is identified as Fracture Critical Weld (FCW).
- The member is located in bay 14.

The Notice of Witness Inspection Number (NWIT) is 07972. The indication is located outside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. ZPMC QC personnel performed 25% MT on these components. The attached photographs provide additional detail.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or

WELDING INSPECTION REPORT

(Continued Page 4 of 4)

remedial efforts please contact Eric Tsang : 15000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Gaikwad,Umesh	Quality Assurance Inspector
Reviewed By:	Patterson,Rodney	QA Reviewer
